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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/537,467	12/08/2005	Alexander Mark Heming	70193	3579

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SYNGENTA CROP PROTECTION, INC.
PATENT AND TRADEMARK DEPARTMENT
410 SWING ROAD
GREENSBORO, NC 27409

EXAMINER

KAUCHER, MARK S

ART UNIT	PAPER NUMBER
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1796

NOTIFICATION DATE	DELIVERY MODE
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06/17/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

department-gso.patent@syngenta.com

Office Action Summary

Application No.

10/537,467

Applicant(s)

HEMING ET AL.

Examiner

MARK S. KAUCHER

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-22 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF 298)
Paper No(s)/Mail Date ____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

Election/Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-21, drawn to a method of enhancing the stability of a particulate suspension.

Group II, claim(s) 22, drawn to particulate suspension.

2. The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: Specifically, claims 1, 4, 9-11, 17-18 and 22, describe a method and solution which is a technical feature common to all the listed groups, and is known in the art. More specifically, Fryd et al. (US 6,262,152, cited in IDS and ISR) discloses a method (and thus a solution) of stabilizing particulate solutions comprising forming a graft polymer comprising ethylhexylacrylate ($g_{EHA}=0.22$), hydroxyethyl acrylate ($f=0.39$), methyl methacrylate ($g_{MMA}=0.22$, $g_{total}=0.44$) and methacrylic acid ($e=0.17$). See examples, particularly example 1. Values calculated from col. 8, lines 32-39. The polymer is crosslinked in the presence of a particulate in an aqueous solution. See abstract and examples. The crosslinker can be methyl xylene diisocyanate. See example 1, specifically col. 9, lines 5-10. Fryd et al. fails to disclose the ratio of polymer to particle (agrochemical). See abstract and col. 1, lines 10-34. While the examples generally give a ratio of 3:2, it would have been obvious to one with ordinary skill in the art at the time the invention was made to utilize lower ratio to reduce the cost of the polymer (dispersant) and, therefore, maximize the use of the dispersant. Furthermore, although Fryd et al. gives examples wherein the particle is a pigment, Fryd et al. generally embraces the use of the system in other applications such as where the particle is a agriculture (e.g., insecticides). See abstract and col. 1, lines 10-34. Therefore, since the limitations of claims 1, 4, 9-11, 17-18 and 22 fail to define a contribution over Fryd et al., they fail to

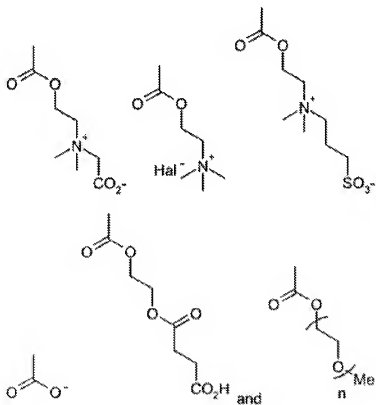
Art Unit: 1796

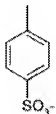
constitute a special technical feature and hence there is lack of unity between the cited claims.

3. This application contains claims directed to more than one species of the generic invention (if Group I is elected above). These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The species are as follows (select one hydrophilic side chain monomer, one crosslinkable side chain monomer, one hydrophobic side chain monomer and select a diisocyanate):

- A hydrophilic monomer with one of the side chains (Claim 9 and 12)



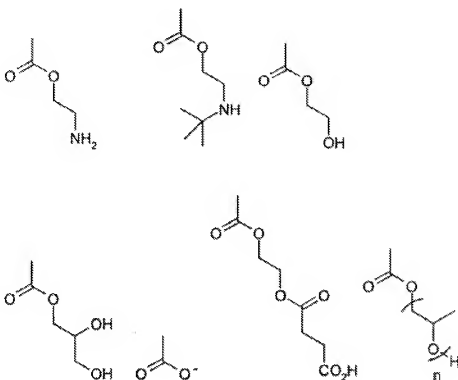


2-(N,N-Dimethyl-N-(2-methacryloxyethyl) ammonium)ethanoic acid, 2-(trimethylammonium)ethyl methacrylate salt ;

3-(N,N-dimethyl-N-(2-methacryloxyethyl) ammonium)propyl-sulphonic acid, the sodium salt of methacrylic acid, mono-2-(methacryloyloxy)ethyl succinate, mono-methoxy poly(ethylene glycol) mono-methacrylate, styrene-4-sulfonic acid, 4-vinylbenzyl trimethyl ammonium chloride, 2-N-morpholinoethyl, 2-methacryloxyethylphosphonate methacrylate, 2-acrylamido-2-methylpropane sulphonic acid, mono-methoxy-PEO-(meth)acrylate, acrylamide, vinyl pyrrolidone, 2-sulphoethyl methacrylate, 2-acrylamido-2-methylpropane sulphonic acid, quaternary salts of dimethylaminoethyl methacrylate (DMAEMA) and of dimethylaminoethyl acrylate or DMAEMA at acid pHs, 2-(trimethylammonium)ethyl methacrylate iodide, 2-(N,N-dimethyl-N-(2-methacryloxyethyl) ammonium)ethanoic acid, or styrene-4-sulfonic acid

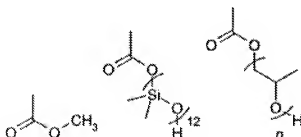
- A crosslinkable monomer with one of the side chains (Claim 10 and 12):

Art Unit: 1796



2-Aminoethyl methacrylate, 2-(tert-butylamino) ethyl methacrylate, 2-Hydroxyethyl methacrylate, 2,3-dihydroxypropyl methacrylate, the sodium salt of methacrylic acid, mono-2-(methacryloyloxy)ethyl succinate, poly(propylene glycol) mono-methacrylate, 2-aminoethyl methacrylate hydrochloride, N-(3-aminopropyl)methacrylamide hydrochloride, 4-aminostyrene, 2-(isopropylamino)ethylstyrene, 4-N-(vinylbenzyl)aminobutyric acid, 3-(N-styrylmethyl-2-aminoethylamino)-propyltrimethoxysilane hydrochloride, N-(3-methacryloxy-2-hydroxypropyl)-3-aminopropyltriethoxysilane; 2-methoxy-4-vinylphenol, 4-vinylbenzyl alcohol, 4-vinylphenol, 2,6-dihydroxymethyl-4-methoxystyrene, 3,5-dimethoxy-4-hydroxystyrene, 2-hydroxy-3-methacryloxypropyl trimethyl ammonium chloride, 3-chloro-2-hydroxypropyl methacrylate, 3-hydroxypropyl methacrylate, 2-hydroxy-3-phenoxypropyl methacrylate, diethylene glycol mono-methacrylate, 2-methacryloxyethyl glucoside, sorbitol methacrylate, caprolactone-2-methacryloxyethyl ester, 4-hydroxybutyl methacrylate, 2-hydroxypropyl methacrylate, acrylic acid, beta-carboxyethylacrylic acid, 4-vinylbenzoic acid, 4-((3-methacryloxy)propoxy)benzoic acid, mono-(2-(methacryloxy)ethyl)phthalate itaconic acid or iminated derivatives of these monomers once polymerised, glycidyl (meth)acrylate following conversion to reactive functional groups by reaction with alkylamines,

- A hydrophobic monomer with one of the side chains (Claim 11 and 12):



- A diisocyanate (Claim 18):

m-phenylene diisocyanate; 1-chloro-2,4-phenylene diisocyanate; 4,4'-methylenebis(phenyl isocyanate); 3,3'-dimethyl-4,4'-biphenylene diisocyanate 4,4'-methylenebis(2-methylphenyl isocyanate); 3,3'-dimethoxy-4,4'-biphenylene diisocyanate; 2,4-tolylene diisocyanate; 2,6-tolylene diisocyanate; tetramethyl-4,4'-biphenylene diisocyanate; isophorone diisocyanate; hexane-1,6-diisocyanate; tetramethylene xylene diisocyanate; α ,4-tolylene diisocyanate; tolylene 2,5-diisocyanate; 2,4,6-trimethyl-1,3-phenylene diisocyanate; poly(ethylene adipate) tolylene 2,4-diisocyanate terminated; poly(isophorone diisocyanate); poly(propylene glycol) tolylene 2,4-diisocyanate terminated; poly(1,4-butanediol) tolylene diisocyanate terminated; 1,8-diisocyanatooctane; poly(hexamethylene diisocyanate); poly(tolylene 2,4-diisocyanate); poly(tetrafluoroethylene oxide-co-difluoromethylene oxide) α , ω -diisocyanate; 1,4-diisocyanatobutane; 1,3-phenylene diisocyanate; 1,4-phenylene diisocyanate; trans-1,4-cyclohexylene diisocyanate; m-xylylene diisocyanate; α , α -dimethyl- α ,4-phenylethyl diisocyanate; 4-bromo-6-methyl-1,3-phenylene diisocyanate; 4-chloro-6-methyl-1,3-phenylene diisocyanate; poly(1,4-butanediol) isophorone diisocyanate terminated; 3,3'-dimethyl-4,4'-biphenylene diisocyanate; and 1,3-bis(1-isocyanato-1-methylethyl)benzene.

4. Applicant is required, in reply to this action, to elect a single species (if invention of Group I is elected above) to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include

all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

5. The claims are deemed to correspond to the species listed above in the following manner:

Claims 9 and 12

The following claim(s) are generic: claims 1-8, 10-11, and 13-22.

6. The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: See paragraph 2 above.

7. Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

8. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one

or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARK S. KAUCHER whose telephone number is (571) 270-7340. The examiner can normally be reached on Monday to Thursday, 8:00 AM to 7:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasudevan S. Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/537,467
Art Unit: 1796

Page 10

/MARK S KAUCHER/
Examiner, Art Unit 1796

/Vasu Jagannathan/
Supervisory Patent Examiner, Art Unit 1796